```
<?xml version="1.0" encoding="UTF-8" ?>
- <xs:schema xmlns:xs="http://www.w3.org/2001/XMLSchema" xmlns="http://www.ciwmb.ca.gov/schemas/swis"
    targetNamespace="http://www.ciwmb.ca.gov/schemas/swis" elementFormDefault="qualified" attributeFormDefault="unqualified">
  - <xs:element name="Inspections">
    - <xs:complexType>
      - <xs:sequence>
        - <xs:element name="Inspection" maxOccurs="unbounded">
          - <xs:complexType>
            - <xs:sequence>
                <xs:element name="InspectionType" type="xs:string" nillable="false" />
                <xs:element name="InputDate" type="xs:date" minOccurs="0" />
                <xs:element name="SwisNumber" type="SwisNumberType" nillable="false" />
                <xs:element name="VersionNumber" type="xs:int" nillable="false" />
                <xs:element name="LocalInspectionID" type="xs:string" nillable="false" />
                <xs:element name="EnforcementAgencyID" type="xs:int" nillable="false" minOccurs="0" />
                <xs:element name="InspectionDate" type="xs:date" nillable="false" />
                <xs:element name="TimeIn" type="xs:string" minOccurs="0" />
                <xs:element name="TimeOut" type="xs:string" minOccurs="0" />
              - <xs:element name="ProgramCode" nillable="false">
                - <xs:simpleType>
                  - <xs:restriction base="xs:string">
                      <xs:enumeration value="LEAPeriodic" />
                      <xs:enumeration value="LEAFocused" />
                      <xs:enumeration value="CIWMBClosedSites" />
                      <xs:enumeration value="CIWMBEnforcementAgent" />
                      <xs:enumeration value="CIWMBFocused" />
                      <xs:enumeration value=" />
                    </xs:restriction>
                  </xs:simpleType>
                </xs:element>
                <xs:element name="FacilityName" type="xs:string" minOcc
                <xs:element name="FacilityLocation" type="xs:string" minO
                <xs:element name="InspectorName" type="xs:string" nillable="fal
              - <xs:element name="InspectorSignature" minOccurs="0">
```

SWIS Digital Inspections Project Update
(SWIS DIP)

Chris Allen, Information Management Branch
California Integrated Waste Management Board

August 31, 2009

What is SWIS DIP?

A delightful appetizer served at fine restaurants?

Skinny-dipping in the Alps?

A fabulous government program to encourage efficiency and lower costs?

What is SWIS DIP?

▸ SWIS = Solid Waste Information System

  ▸ Used by the California Integrated Waste Management Board to track solid waste facilities

▸ DIP = Digital Inspections Program

  ▸ An recent online addition to SWIS.

▸ SWIS DIP = A new method for LEAs to submit solid waste facility inspection data to the CIWMB in electronic format rather than using paper forms.

▸

SWIS Digital Inspections: Introduction

- Three methods to submit data electronically:
  - Data entry by authorized users using a secured web form.
  - Uploading of batch data in specified XML format.
  - Automated XML data exchange via web services.
- Batch data must be uploaded using the XML schema (data specification) provided by the CIWMB.
- Conducting XML data transfers typically requires LEAs to seek their own IT assistance—CIWMB cannot provide IT training/consulting.
- Optional program—LEAs can continue with paper forms

Project Goals:

▸ Board response to CCDEH and LEA requests "to set in place XML-based electronic reporting system."

▸ Develop an approach based on standard industry technologies and practices (XML, web services).

▸ Use pragmatic technical approaches accessible/adoptable by as many LEAs and their database vendors as practical.

▸ Implement service relatively quickly.

▸ Minimize costs to the CIWMB.

▸ *Key Takeaway: SWIS DIP is in production. LEAs can submit inspection data using XML and web services.*

Three ways to submit data!

▸ *Easy*

Manual data entry of single inspections using web forms.

▸ *More Complex*

Multiple inspections by uploading an XML data file.

▸ *Most Complex*

"Real-time" single or multiple inspections in XML format submitted to a CIWMB web service.

▸

Easy: Single Inspection Data Entry via a Web Form

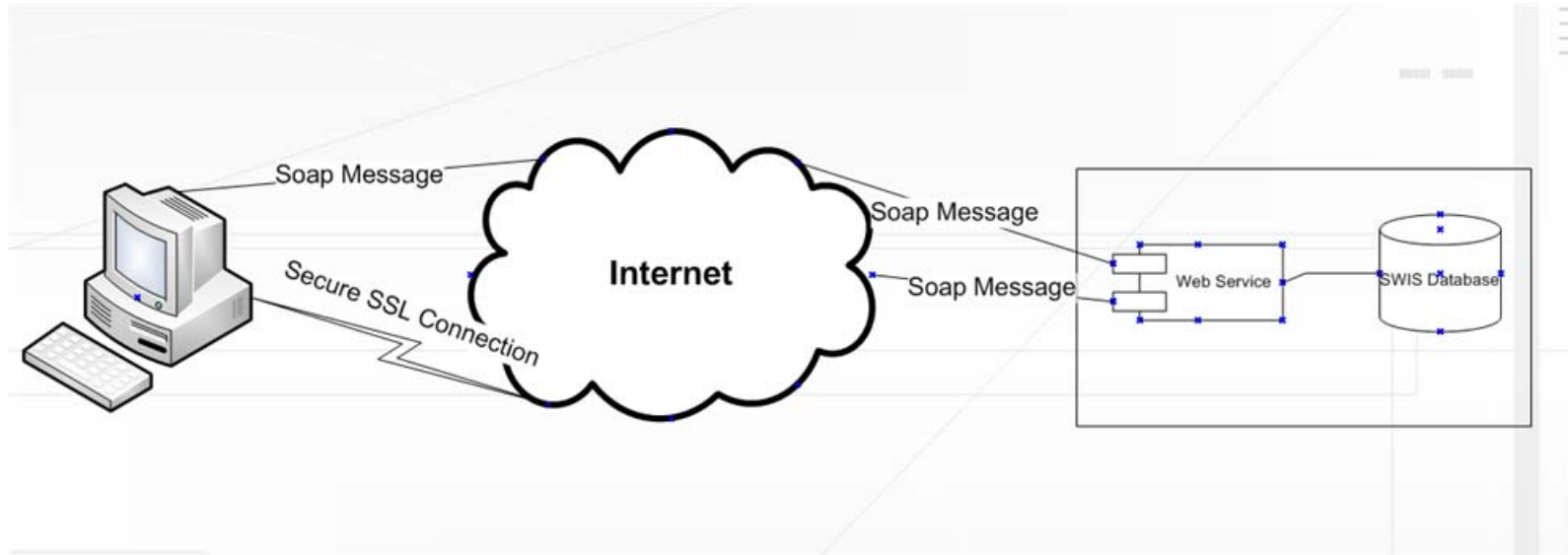# More Complex: Batch upload of XML Data

```xml
<?xml version="1.0" encoding="UTF-8" ?>
<!-- Sample XML file generated by XMLSpy v2008 rel. 2 sp1 (http://www.altova.com) -->
<Inspections xsi:schemaLocation="http://www.ciwmb.ca.gov/schemas/swis SWISInspectionv1.xsd"
  xmlns="http://www.ciwmb.ca.gov/schemas/swis"
  xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <Inspection>
    <InspectionType>52</InspectionType>
    <InspectionStatus>Draft</InspectionStatus>
    <SwisNumber>15-AA-0050</SwisNumber>
    <VersionNumber>1</VersionNumber>
    <LocalInspectionID>1</LocalInspectionID>
    <InspectionDate>2006-10-30</InspectionDate>
    <InspectionTime>2.0</InspectionTime>
    <ProgramCode>LEAPeriodic</ProgramCode>
    <FacilityName>Arvin Sanitary Landfill</FacilityName>
    <FacilityLocation>T31S R29E, Section 31</FacilityLocation>
    <InspectorName>Charles Bauer, REHS</InspectorName>
    <OwnerName>Kern County Waste Management Department</OwnerName>
    <OwnerOperatorEmail>Sample@Somewhere.com</OwnerOperatorEmail>
    <RecievedBy>Mailed To Operator</RecievedBy>
    <FacilityLatitude>35-19009</FacilityLatitude>
    <FacilityLongitude>-118.90841</FacilityLongitude>
    <Regulations>
      <Regulation RegulationCode="PRC 44004(a)" RegulationComment="This section requires, in
        part, that no operator of a solid waste facility shall make any significant change in the
        design or operation of the solid waste facility not authorized by the existing permit,
        nuless the change is approved by the LEA, and conforms with this division and all of the
        regulations adopted pursuant to this division, and the terms and conditions of solid waste
        facilities permit and revised to reflect the change. The facility ceased accepting waste
        from teh public on July 1, 2003 and is no longer consistent with its current solid waste
        facility permis issued on December 29, 1997" SeverityLevel="V" />
      <Regulation RegulationCode="20700" RegulationComment="This section requires that the
        operator maintain a layer of compacted earthen material of a least 12 inches which is to
        be placed on the surfaces of the fill where no additional solid waste will be deposited
```

Most Complex: "Real-time" XML Data Submittal to a Web Service

It appears this approach will most likely be initially implemented by database vendors like Decade Software.

SWIS DIP Project Status

▶ Nov. 2007: CCDEH letter to CIWMB.

▶ Nov.2008: Test version introduced at LEA Conference.

▶ Dec.2008: Production version available.

▶ Jan.2009: LEAs submit first web form-based inspections.

▶ Spring/Summer 2009: Decade Software begins prototyping/scoping XML-based submittals to SWIS DIP.

▶ <u>As of August 2009:</u>

   ▶ 10 LEAs performing web form inspections (1,100 submitted)

   ▶ 2 LEAs pending approval

   ▶ Decade Software and Kern County testing XML submittals.

▶

Key Issues and Concerns 1

▸ This is a voluntary program.

▸ This new process does not mandate any particular business process for collecting data.

▸ Digital photos and attachments are supported.

▸ All project specifications and policies are publicly available.

▸ This project is **not** about laptops or PDA access, but LEAs could certainly use such devices to collect information prior to submittal to CIWMB.

▸ LEAs can use grant funds to pay for [some] costs.

▸

Key Issues and Concerns 2

▸ Submitting XML batch uploads requires IT expertise.

▸ Going "paperless" may require LEAs to change their internal business processes.

▸ CIWMB will minimize breaking changes to the XML schema once in production. Any breaking schema changes announced well in advance.

▸ Who can help LEAs? LEA's IT staff, IT contractors, LEA vendors providing "environmental tracking" software.

▸ If your database vendor is interested, have them review the web site and contact CIWMB staff.

▸

Signing up for SWIS DIP

To start using SWIS DIP, visit the SWIS DIP home page at http://www.ciwmb.ca.gov/SWIS/DIP/

Next Steps / Call to Action

▶ Review the materials on the SWIS DIP project web site

http://www.ciwmb.ca.gov/SWIS/DIP/

▶ If interested, encourage your IT staff or database vendor to explore the XML data submittal approaches (batch/web service).

Questions and Answers

Program Information, Documents, etc.:

▸ SWIS DIP Web Site: http://www.ciwmb.ca.gov/SWIS/DIP/

After you have read materials above, contact:

▸ CIWMB SWIS DIP Coordinator:

Amy Norris   anorris@ciwmb.ca.gov

▸ CIWMB SWIS DIP Management Contact:

Bonnie Cornwall   bcornwall@ciwmb.ca.gov

▸ CIWMB Technical contact:

Chris Allen   callen@ciwmb.ca.gov

▸